

Day : Wednesday

Date: 3/1/2006
Time: 20:00:53**PALM INTRANET**

Inventor Information for 10/678927

Inventor Name	City	State/Country
GOULD, STEVEN A.	HIGHLAND PARK	ILLINOIS
DEWOSKIN, RICHARD E.	ST. CHARLES	ILLINOIS
DOUBLEDAY, MARC D.	CARY	ILLINOIS
HIDES, GEORGE A.	CHICAGO	ILLINOIS

Appln Info	Contents	Petition Info	Atty/Agent Info	Continuity Data	Foreign Data
------------	----------	---------------	-----------------	-----------------	--------------

Search Another: Application# or Patent#

PCT / / or PG PUBS #

Attorney Docket #

Bar Code #

To go back use Back button on your browser toolbar.

Back to [PALM](#) | [ASSIGNMENT](#) | [OASIS](#) | [Home page](#)

Day : Wednesday

Date: 3/1/2006
Time: 20:01:02

PALM INTRANET
Inventor Name Search Result

Your Search was:

Last Name = GOULD

First Name = STEVEN

Application#	Patent#	Status	Date Filed	Title	Inventor Name
09638471	6323320	150	08/14/2000	Acellular red blood cell substitute	GOULD, STEVEN A.
09995203	6552173	150	11/27/2001	ACELLULAR RED BLOOD CELL SUBSTITUTE	GOULD, STEVEN A.
10348579	6914127	150	01/21/2003	ACELLULAR RED BLOOD CELL SUBSTITUTE	GOULD, STEVEN A.
10678927	Not Issued	30	10/03/2003	Method for treating patients with massive blood loss	GOULD, STEVEN A.
60415935	Not Issued	159	10/03/2002	Method for treating patients with massive blood loss	GOULD, STEVEN A.
06876689	4826811	150	06/20/1986	ACELLULAR RED BLOOD CELL SUBSTITUTE	GOULD, STEVEN A.
07315130	Not Issued	166	02/23/1989	ACELLULAR RED BLOOD CELL SUBSTITUTE	GOULD, STEVEN A.
07345416	Not Issued	166	04/28/1989	ACELLULAR RED BLOOD CELL SUBSTITUTE	GOULD, STEVEN A.
07616727	5194590	150	11/21/1990	ACELLULAR RED BLOOD CELL SUBSTITUTE	GOULD, STEVEN A.
07896734	Not Issued	166	06/09/1992	ACELLULAR RED BLOOD CELL SUBSTITUTE	GOULD, STEVEN A.
08031563	6133425	150	03/15/1993	ACELLULAR RED BLOOD CELL SUBSTITUTE	GOULD, STEVEN A.
08203505	5464814	150	02/28/1994	ACELLULAR RED BLOOD CELL SUBSTITUTE	GOULD, STEVEN A.
08484942	5747649	150	06/07/1995	ACELLULAR RED BLOOD CELL SUBSTITUTE	GOULD, STEVEN A.
08486712	Not Issued	161	06/07/1995	AN ACELLULAR RED BLOOD CELL SUBSTITUTE	GOULD, STEVEN A.
07004052	4736936	150	01/16/1987	HANKY DELIVERY SYSTEM	GOULD, STEVEN G.
07201583	Not	161	06/02/1988	APPARATUS AND METHOD	GOULD, STEVEN

	Issued			FOR STACKING	G.
07414681	5040663	150	09/29/1989	APPARATUS AND METHOD FOR STACKING	GOULD, STEVEN G.
07552766	4995141	150	07/16/1990	METHOD AND APPARATUS FOR FACILITATING PRODUCT CHANGEOVER IN THE MANUFACTURE OF FLUFF PADS FOR DISPOSABLE DIAPERS	GOULD, STEVEN G.
60575494	Not Issued	159	05/28/2004	Method and system for cost and risk management	GOULD, STEVEN J.
07203131	4823912	150	06/06/1988	MULTIPURPOSE LADDER FIXTURE	GOULD, STEVEN P.

Inventor Search Completed: No Records to Display.

Search Another: Inventor	Last Name	First Name	<input type="button" value="Search"/>
	<input type="text" value="GOULD"/>	<input type="text" value="STEVEN"/>	

To go back use Back button on your browser toolbar.

Back to [PALM](#) | [ASSIGNMENT](#) | [OASIS](#) | [Home page](#)

Day : Wednesday

Date: 3/1/2006
Time: 20:01:17**Inventor Name Search Result**

Your Search was:

Last Name = DEWOSKIN

First Name = RICHARD

Application#	Patent#	Status	Date Filed	Title	Inventor Name
10124941	Not Issued	161	04/18/2002	Stabilized hemoglobin solutions	DEWOSKIN, RICHARD
10767516	Not Issued	30	01/29/2004	Polymerized hemoglobin solutions having reduced amounts of tetramer and method for preparing	DEWOSKIN, RICHARD
11231921	Not Issued	30	09/21/2005	Stabilized hemoglobin solutions	DEWOSKIN, RICHARD
60284651	Not Issued	159	04/18/2001	Flexible container system for aqueous materials	DEWOSKIN, RICHARD
60284664	Not Issued	159	04/18/2001	Method for preserving a hemoglobin blood substitute	DEWOSKIN, RICHARD
60443436	Not Issued	159	01/29/2003	Polymerized hemoglobin solutions having reduced amounts of tetramer and method for preparing	DEWOSKIN, RICHARD
60014389	Not Issued	159	03/28/1996	METHODS AND APPARATUS FOR PREPARING AN ACELLULAR RED BLOOD CELL SUBSTITUTE	DEWOSKIN, RICHARD E
09995203	6552173	150	11/27/2001	ACELLULAR RED BLOOD CELL SUBSTITUTE	DEWOSKIN, RICHARD E.
10274099	Not Issued	161	10/17/2002	Method and apparatus for preparing an acellular read blood cell substitute	DEWOSKIN, RICHARD E.
10348579	6914127	150	01/21/2003	ACELLULAR RED BLOOD CELL SUBSTITUTE	DEWOSKIN, RICHARD E.
10678927	Not Issued	30	10/03/2003	Method for treating patients with massive blood loss	DEWOSKIN, RICHARD E.
10993228	Not Issued	30	11/19/2004	Method and apparatus for preparing an acellular red blood cell substitute	DEWOSKIN, RICHARD E.

60415935	Not Issued	159	10/03/2002	Method for treating patients with massive blood loss	DEWOSKIN, RICHARD E.
07896734	Not Issued	166	06/09/1992	ACELLULAR RED BLOOD CELL SUBSTITUTE	DEWOSKIN, RICHARD E.
08203505	5464814	150	02/28/1994	ACELLULAR RED BLOOD CELL SUBSTITUTE	DEWOSKIN, RICHARD E.

Inventor Search Completed: No Records to Display.

	Last Name	First Name	
Search Another: Inventor	<input type="text" value="DEWOSKIN"/>	<input type="text" value="RICHARD"/>	<input type="button" value="Search"/>

To go back use Back button on your browser toolbar.

Back to [PALM](#) | [ASSIGNMENT](#) | [OASIS](#) | [Home page](#)

Day : Wednesday

Date: 3/1/2006

Time: 20:01:28

PALM INTRANET

Inventor Name Search Result

Your Search was:

Last Name = DOUBLEDAY

First Name = MARC

Application#	Patent#	Status	Date Filed	Title	Inventor Name
10124941	Not Issued	161	04/18/2002	Stabilized hemoglobin solutions	DOUBLEDAY, MARC
10767516	Not Issued	30	01/29/2004	Polymerized hemoglobin solutions having reduced amounts of tetramer and method for preparing	DOUBLEDAY, MARC
11231921	Not Issued	30	09/21/2005	Stabilized hemoglobin solutions	DOUBLEDAY, MARC
60284651	Not Issued	159	04/18/2001	Flexible container system for aqueous materials	DOUBLEDAY, MARC
60284664	Not Issued	159	04/18/2001	Method for preserving a hemoglobin blood substitute	DOUBLEDAY, MARC
60443436	Not Issued	159	01/29/2003	Polymerized hemoglobin solutions having reduced amounts of tetramer and method for preparing	DOUBLEDAY, MARC
10274099	Not Issued	161	10/17/2002	Method and apparatus for preparing an acellular red blood cell substitute	DOUBLEDAY, MARC D.
10678927	Not Issued	30	10/03/2003	Method for treating patients with massive blood loss	DOUBLEDAY, MARC D.
10993228	Not Issued	30	11/19/2004	Method and apparatus for preparing an acellular red blood cell substitute	DOUBLEDAY, MARC D.
60415935	Not Issued	159	10/03/2002	Method for treating patients with massive blood loss	DOUBLEDAY, MARC D.
60761663	Not Issued	20	01/24/2006	Polymerized hemoglobin media and its use in isolation and transplantation of islet cells	DOUBLEDAY, MARC D.
09155419	6498141	150	05/10/1999	METHOD AND APPARATUS FOR PREPARING AN ACELLULAR RED BLOOD CELL SUBSTITUTE	DOUBLEDAY, MARC D.

Inventor Search Completed: No Records to Display.

	Last Name	First Name	
Search Another: Inventor	<input type="text" value="DOUBLEDAY"/>	<input type="text" value="MARC"/>	<input type="button" value="Search"/>

To go back use Back button on your browser toolbar.

Back to [PALM](#) | [ASSIGNMENT](#) | [OASIS](#) | [Home page](#)

Day : Wednesday

Date: 3/1/2006
Time: 20:01:37**Inventor Name Search Result**

Your Search was:

Last Name = HIDES

First Name = GEORGE

Application#	Patent#	Status	Date Filed	Title	Inventor Name
10678927	Not Issued	30	10/03/2003	Method for treating patients with massive blood loss	HIDES, GEORGE A.
60415935	Not Issued	159	10/03/2002	Method for treating patients with massive blood loss	HIDES, GEORGE A.

Inventor Search Completed: No Records to Display.

Search Another: Inventor	Last Name	First Name	Search
	<input type="text" value="HIDES"/>	<input type="text" value="GEORGE"/>	

To go back use Back button on your browser toolbar.

Back to [PALM](#) | [ASSIGNMENT](#) | [OASIS](#) | [Home page](#)


```

=> File .Biotech
=> s (Red Blood Cell# or RBC)
L1      195015 (RED BLOOD CELL# OR RBC)

=> s (Hemoglobin# or Hb)
L2      408738 (HEMOGLOBIN# OR HB)

=> s L1 and L2
L3      32727 L1 AND L2

=> s l3 and (polymer? hemoglobin)
L4      244 L3 AND (POLYMER? HEMOGLOBIN)

=> s l4 and (acellular solution or tetramer free or stroma free)
L5      88 L4 AND (ACELLULAR SOLUTION OR TETRAMER FREE OR STROMA FREE)

=> s l5 and (polymer? or blood substitut? or plasma exapnd?)
L6      88 L5 AND (POLYMER? OR BLOOD SUBSTITUT? OR PLASMA EXAPND?)

=> s l6 and (treat? or therapeut? or prevent? or ameliorat?)
L7      86 L6 AND (TREAT? OR THERAPEUT? OR PREVENT? OR AMELIORAT?)

=> s l7 and (ischem? or anem? or bleed?)
L8      57 L7 AND (ISCHEM? OR ANEM? OR BLEED?)

=> s l8 and (disorder or shock or circulatory collapse or blood loss or surg?)
L9      55 L8 AND (DISORDER OR SHOCK OR CIRCULATORY COLLAPSE OR BLOOD
      LOSS OR SURG?)

=> s l9 and (blood pressure# or arterial pressure#)
      2 FILES SEARCHED...
L10     40 L9 AND (BLOOD PRESSURE# OR ARTERIAL PRESSURE#)

=> s l10 and (polymerized hemoglobin solution)
L11     20 L10 AND (POLYMERIZED HEMOGLOBIN SOLUTION)

=> s l11 and (massive blood loss)
L12     2 L11 AND (MASSIVE BLOOD LOSS)

=> d l12 1-2 bib ab

L12     ANSWER 1 OF 2  USPATFULL on STN
AN      2004:88900  USPATFULL
TI      Method for treating patients with massive
      blood loss
IN      Gould, Steven A., Highland Park, IL, UNITED STATES
      DeWoskin, Richard E., St. Charles, IL, UNITED STATES
      Doubleday, Marc D., Cary, IL, UNITED STATES
      Hides, George A., Chicago, IL, UNITED STATES
PA      Northfield Laboratories, Inc., Evanston, IL (U.S. corporation)
PI      US 2004067876      A1      20040408
AI      US 2003-678927      A1      20031003 (10)
PRAI    US 2002-415935P      20021003 (60)
DT      Utility
FS      APPLICATION
LREP    MCDONNELL BOEHNEN HULBERT & BERGHOFF, 300 SOUTH WACKER DRIVE, SUITE
      3200, CHICAGO, IL, 60606
CLMN    Number of Claims: 47
ECL     Exemplary Claim: 1
DRWN    4 Drawing Page(s)
LN.CNT  1013
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      Methods for treating a mammal suffering from massive
      blood loss comprising administering to the mammal a
      polymerized hemoglobin solution.

```

L12 ANSWER 2 OF 2 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN

AN 2004-304610 [28] WPIDS

DNC C2004-115725

TI **Treatment** of mammal suffering from life threatening level of **red blood cell hemoglobin** as result of **blood loss**, comprises administration of **polymerized hemoglobin solution** to mammal.

DC B04

IN DEWOSKIN, R E; DOUBLEDAY, M D; GOULD, S A; HIDES, G A

PA (NORT-N) NORTHFIELD LAB

CYC 106

PI US 2004067876 A1 20040408 (200428)* 15

WO 2004037279 A1 20040506 (200430) EN

RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS

LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK

DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR

KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH

PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC

VN YU ZA ZM ZW

AU 2003272827 A1 20040513 (200468)

NO 2005001390 A 20050530 (200545)

EP 1553968 A1 20050720 (200547) EN

R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV

MC MK NL PT RO SE SI SK TR

JP 2006502231 W 20060119 (200607) 28

ADT US 2004067876 A1 Provisional US 2002-415935P 20021003, US 2003-678927

20031003; WO 2004037279 A1 WO 2003-US31377 20031003; AU 2003272827 A1 AU

2003-272827 20031003; NO 2005001390 A WO 2003-US31377 20031003, NO

2005-1390 20050316; EP 1553968 A1 EP 2003-755029 20031003, WO 2003-US31377

20031003; JP 2006502231 W WO 2003-US31377 20031003, JP 2004-546786

20031003

FDT AU 2003272827 A1 Based on WO 2004037279; EP 1553968 A1 Based on WO

2004037279; JP 2006502231 W Based on WO 2004037279

PRAI US 2002-415935P 20021003; US 2003-678927 20031003

AB US2004067876 A UPAB: 20040429

NOVELTY - **Treatment** of a mammal suffering from a life threatening level of **red blood cell**

hemoglobin (RBC Hb) as the result of

blood loss, comprises administering a

polymerized hemoglobin solution to the mammal.

ACTIVITY - Antianemic; Vasotropic. The dose of PolyHeme (RTM) received by 171 patients was 50-100 g. The maximum rate of infusion was approx. 2 units (1 L) per minute in uncontrolled hemorrhage. The maximum plasma **hemoglobin** concentration was 8 g/dL in a single patient who received 8 units of PolyHeme. The maximum mean plasma **hemoglobin** concentration was 5.9 plus or minus 1.1 g/dL in the group of patient who received 20 units of PolyHeme, reflecting the equilibrium between ongoing **blood loss** and replacement. There was no mortality increase as the **RBC hemoglobin** concentration fell below 3 g/dL.

MECHANISM OF ACTION - None given.

USE - The method is for **treating** a mammal suffering from a life threatening level of **red blood cell**

hemoglobin (RBC Hb) as the result of

massive blood loss. The method

prevents anemia, irreversible **ischemia**, or

hypovolemic shock in a patient suffering from **massive**

blood loss. (All claimed)

ADVANTAGE - The administration of the **hemoglobin** solution

maintains a mean circulating **hemoglobin** level greater than 5

g/d, and maintains **arterial pressure** above 60 mmHg.

The solution avoids the toxicities associated with vasoconstriction, and renal, pancreatic, gastrointestinal and cardiac dysfunction.

DESCRIPTION OF DRAWING(S) - The figure is a graph depicting the mean
(plus or minus SD) total plasma **hemoglobin** concentration versus
dose of **polymerized hemoglobin solution**.
Dwg.1/4

=> s Gould, S?/au
L13 2785 GOULD, S?/AU

=> s l10 and l13
L14 10 L10 AND L13

=> s DeWoskin, R?/au
L15 105 DEWOSKIN, R?/AU

=> s l10 and l15
L16 6 L10 AND L15

=> s Doubleday, M?/au
L17 48 DOUBLEDAY, M?/AU

=> s l10 and l17
L18 5 L10 AND L17

=> s Hides, G?/au
L19 7 HIDES, G?/AU

=> s l10 and l19
L20 2 L10 AND L19

=> s l14 and l16
L21 4 L14 AND L16

=> s l18 and l20
L22 2 L18 AND L20

=> s l21 and l22
L23 2 L21 AND L22

=> d l23 1-2 bib ab

L23 ANSWER 1 OF 2 USPATFULL on STN

AN 2004:88900 USPATFULL

TI Method for **treating** patients with massive **blood loss**

IN Gould, Steven A., Highland Park, IL, UNITED STATES

DeWoskin, Richard E., St. Charles, IL, UNITED STATES

Doubleday, Marc D., Cary, IL, UNITED STATES

Hides, George A., Chicago, IL, UNITED STATES

PA Northfield Laboratories, Inc., Evanston, IL (U.S. corporation)

PI US 2004067876 A1 20040408

AI US 2003-678927 A1 20031003 (10)

PRAI US 2002-415935P 20021003 (60)

DT Utility

FS APPLICATION

LREP MCDONNELL BOEHNEN HULBERT & BERGHOFF, 300 SOUTH WACKER DRIVE, SUITE
3200, CHICAGO, IL, 60606

CLMN Number of Claims: 47

ECL Exemplary Claim: 1

DRWN 4 Drawing Page(s)

LN.CNT 1013

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods for **treating** a mammal suffering from massive
blood loss comprising administering to the mammal a
polymerized hemoglobin solution.

L23 ANSWER 2 OF 2 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
AN 2004-304610 [28] WPIDS
DNC C2004-115725
TI **Treatment** of mammal suffering from life threatening level of
red blood cell hemoglobin as result
of **blood loss**, comprises administration of
polymerized hemoglobin solution to mammal.
DC B04
IN DEWOSKIN, R E; DOUBLEDAY, M D; GOULD, S A;
HIDES, G A
PA (NORT-N) NORTHFIELD LAB
CYC 106
PI US 2004067876 A1 20040408 (200428)* 15
WO 2004037279 A1 20040506 (200430) EN
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS
LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH
PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC
VN YU ZA ZM ZW
AU 2003272827 A1 20040513 (200468)
NO 2005001390 A 20050530 (200545)
EP 1553968 A1 20050720 (200547) EN
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV
MC MK NL PT RO SE SI SK TR
JP 2006502231 W 20060119 (200607) 28
ADT US 2004067876 A1 Provisional US 2002-415935P 20021003, US 2003-678927
20031003; WO 2004037279 A1 WO 2003-US31377 20031003; AU 2003272827 A1 AU
2003-272827 20031003; NO 2005001390 A WO 2003-US31377 20031003, NO
2005-1390 20050316; EP 1553968 A1 EP 2003-755029 20031003, WO 2003-US31377
20031003; JP 2006502231 W WO 2003-US31377 20031003, JP 2004-546786
20031003
FDT AU 2003272827 A1 Based on WO 2004037279; EP 1553968 A1 Based on WO
2004037279; JP 2006502231 W Based on WO 2004037279
PRAI US 2002-415935P 20021003; US 2003-678927 20031003
AB US2004067876 A UPAB: 20040429
NOVELTY - **Treatment** of a mammal suffering from a life
threatening level of **red blood cell**
hemoglobin (RBC Hb) as the result of
blood loss, comprises administering a
polymerized hemoglobin solution to the mammal.
ACTIVITY - Antianemic; Vasotropic. The dose of PolyHeme (RTM)
received by 171 patients was 50-100 g. The maximum rate of infusion was
approx. 2 units (1 L) per minute in uncontrolled hemorrhage. The maximum
plasma **hemoglobin** concentration was 8 g/dL in a single patient
who received 8 units of PolyHeme. The maximum mean plasma
hemoglobin concentration was 5.9 plus or minus 1.1 g/dL in the
group of patient who received 20 units of PolyHeme, reflecting the
equilibrium between ongoing **blood loss** and
replacement. There was no mortality increase as the **RBC**
hemoglobin concentration fell below 3 g/dL.
MECHANISM OF ACTION - None given.
USE - The method is for **treating** a mammal suffering from a
life threatening level of **red blood cell**
hemoglobin (RBC Hb) as the result of massive
blood loss. The method **prevents anemia**
, irreversible **ischemia**, or hypovolemic **shock** in a
patient suffering from massive **blood loss**. (All
claimed)
ADVANTAGE - The administration of the **hemoglobin** solution
maintains a mean circulating **hemoglobin** level greater than 5
g/d, and maintains **arterial pressure** above 60 mmHg.
The solution avoids the toxicities associated with vasoconstriction, and

renal, pancreatic, gastrointestinal and cardiac dysfunction.

DESCRIPTION OF DRAWING(S) - The figure is a graph depicting the mean (plus or minus SD) total plasma **hemoglobin** concentration versus dose of **polymerized hemoglobin** solution.

Dwg.1/4

=> d l14 1-10 bib ab

L14 ANSWER 1 OF 10 USPATFULL on STN

AN 2004:88900 USPATFULL

TI Method for **treating** patients with massive **blood loss**

IN **Gould, Steven A.**, Highland Park, IL, UNITED STATES
DeWoskin, Richard E., St. Charles, IL, UNITED STATES
Doubleday, Marc D., Cary, IL, UNITED STATES
Hides, George A., Chicago, IL, UNITED STATES

PA Northfield Laboratories, Inc., Evanston, IL (U.S. corporation)

PI US 2004067876 A1 20040408

AI US 2003-678927 A1 20031003 (10)

PRAI US 2002-415935P 20021003 (60)

DT Utility

FS APPLICATION

LREP MCDONNELL BOEHNEN HULBERT & BERGHOFF, 300 SOUTH WACKER DRIVE, SUITE 3200, CHICAGO, IL, 60606

CLMN Number of Claims: 47

ECL Exemplary Claim: 1

DRWN 4 Drawing Page(s)

LN.CNT 1013

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods for **treating** a mammal suffering from massive **blood loss** comprising administering to the mammal a **polymerized hemoglobin** solution.

L14 ANSWER 2 OF 10 USPATFULL on STN

AN 2003:188694 USPATFULL

TI Acellular **red blood cell** substitute

IN Sehgal, Lakshman R., Flossmoor, IL, UNITED STATES
DeWoskin, Richard E., Mount Prospect, IL, UNITED STATES
Moss, Gerald S., Highland Park, IL, UNITED STATES
Gould, Steven A., Highland Park, IL, UNITED STATES
Rosen, Arthur L., Wilmette, IL, UNITED STATES
Sehgal, Hansa, Flossmoor, IL, UNITED STATES

PA Northfield Laboratories, Inc. (U.S. corporation)

PI US 2003130487 A1 20030710

US 6914127 B2 20050705

AI US 2003-348579 A1 20030121 (10)

RLI Continuation of Ser. No. US 2001-995203, filed on 27 Nov 2001, GRANTED, Pat. No. US 6552173 Continuation of Ser. No. US 2000-638471, filed on 14 Aug 2000, GRANTED, Pat. No. US 6323320 Continuation of Ser. No. US 1993-31563, filed on 15 Mar 1993, GRANTED, Pat. No. US 6133425 Continuation of Ser. No. US 1990-616727, filed on 21 Nov 1990, GRANTED, Pat. No. US 5194590 Continuation of Ser. No. US 1989-315130, filed on 23 Feb 1989, ABANDONED Continuation of Ser. No. US 1986-876689, filed on 20 Jun 1986, GRANTED, Pat. No. US 4826811

DT Utility

FS APPLICATION

LREP Steven J. Sarussi, McDonnell Boehnen Hulbert & Berghoff, 32nd Floor, 300 S. Wacker Drive, Chicago, IL, 60606

CLMN Number of Claims: 1

ECL Exemplary Claim: 40

DRWN 10 Drawing Page(s)

LN.CNT 898

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An acellular **red blood cell** substitute

which comprises an essentially **tetramer-free**,
substantially **stroma-free**, cross-linked,
polymerized, pyridoxylated **hemoglobin** and a nontoxic,
pharmaceutically acceptable carrier, its use and a process for preparing
said acellular **red blood cell** substitute.

L14 ANSWER 3 OF 10 USPATFULL on STN
AN 2002:120018 USPATFULL
TI Acellular **red blood cell** substitute
IN Sehgal, Lakshman R., Flossmoor, IL, UNITED STATES
DeWoskin, Richard E., Mount Prospect, IL, UNITED STATES
Moss, Gerald S., Highland Park, IL, UNITED STATES
Gould, Steven A., Highland Park, IL, UNITED STATES
Rosen, Arthur L., Wilmette, IL, UNITED STATES
Sehgal, Hansa, Flossmoor, IL, UNITED STATES
PA Northfield Laboratories, Inc. (U.S. corporation)
PI US 2002062007 A1 20020523
US 6552173 B2 20030422
AI US 2001-995203 A1 20011127 (9)
RLI Continuation of Ser. No. US 2000-638471, filed on 14 Aug 2000, PATENTED
Continuation of Ser. No. US 1993-31563, filed on 15 Mar 1993, PATENTED
Continuation of Ser. No. US 1990-616727, filed on 21 Nov 1990, PATENTED
Continuation of Ser. No. US 1989-315130, filed on 23 Feb 1989, ABANDONED
Continuation of Ser. No. US 1986-876689, filed on 20 Jun 1986, PATENTED
DT Utility
FS APPLICATION
LREP Steven J. Sarussi, McDonnell Boehnen Hulbert & Berghoff, 32nd Floor, 300
S. Wacker Drive, Chicago, IL, 60606
CLMN Number of Claims: 1
ECL Exemplary Claim: 40
DRWN 10 Drawing Page(s)
LN.CNT 899
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An a cellular **red blood cell** substitute
which comprises an essentially **tetramer-free**,
substantially **stroma-free**, cross-linked,
polymerized, pyridoxylated **hemoglobin** and a nontoxic,
pharmaceutically acceptable carrier, its use and a process for preparing
said a cellular **red blood cell** substitute.

L14 ANSWER 4 OF 10 USPATFULL on STN
AN 2001:215159 USPATFULL
TI Acellular **red blood cell** substitute
IN Sehgal, Lakshman R., Cook County, IL, United States
De Woskin, Richard E., Cook County, IL, United States
Moss, Gerald S., Lake County, IL, United States
Gould, Steven A., Lake County, IL, United States
Rosen, Arthur L., Cook County, IL, United States
Sehgal, Hansa, Cook County, IL, United States
PA Northfield Laboratories, Inc., Evanston, IL, United States (U.S.
corporation)
PI US 6323320 B1 20011127
AI US 2000-638471 20000814 (9)
RLI Continuation of Ser. No. US 1993-31563, filed on 15 Mar 1993, now
patented, Pat. No. US 6133425 Continuation of Ser. No. US 1990-616727,
filed on 21 Nov 1990, now patented, Pat. No. US 5194590 Continuation of
Ser. No. US 1989-315130, filed on 23 Feb 1989, now abandoned
Continuation of Ser. No. US 1986-876689, filed on 20 Jun 1986, now
patented, Pat. No. US 4826811
DT Utility
FS GRANTED
EXNAM Primary Examiner: Sayala, Chhaya D.
LREP McDonnell Boehnen Hulbert & Berghoff
CLMN Number of Claims: 13
ECL Exemplary Claim: 1

DRWN 14 Drawing Figure(s); 10 Drawing Page(s)

LN.CNT 923

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An acellular **red blood cell** substitute which comprises an essentially **tetramer-free**, substantially **stroma-free**, cross-linked, **polymerized**, pyridoxylated **hemoglobin** and a nontoxic, pharmaceutically acceptable carrier, its use and a process for preparing said acellular **red blood cell** substitute.

L14 ANSWER 5 OF 10 USPATFULL on STN

AN 2000:138510 USPATFULL

TI Acellular **red blood cell** substitute

IN Sehgal, Lakshman R., Cook County, IL, United States
De Woskin, Richard E., Cook County, IL, United States
Moss, Gerald S., Lake County, IL, United States

Gould, Steven A., Lake County, IL, United States

Rosen, Arthur L., Cook County, IL, United States

Sehgal, Hansa, Cook County, IL, United States

PA Northfield Laboratories, Inc, Evanston, IL, United States (U.S. corporation)

PI US 6133425 20001017

AI US 1993-31563 19930315 (8)

RLI Continuation of Ser. No. US 1990-616727, filed on 21 Nov 1990, now patented, Pat. No. US 5194590 which is a continuation of Ser. No. US 1989-315130, filed on 23 Feb 1989, now abandoned which is a continuation of Ser. No. US 1986-876689, filed on 20 Jun 1986, now patented, Pat. No. US 4826811

DT Utility

FS Granted

EXNAM Primary Examiner: Sayala, Chhaya D.

LREP McDonnell Boehnen Hulbert & Berghoff, Sarussi, Steven J.

CLMN Number of Claims: 1

ECL Exemplary Claim: 1

DRWN 14 Drawing Figure(s); 10 Drawing Page(s)

LN.CNT 885

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An acellular **red blood cell** substitute which comprises an essentially **tetramer-free**, substantially **stroma-free**, cross-linked, **polymerized**, pyridoxylated **hemoglobin** and a nontoxic, pharmaceutically acceptable carrier, its use and a process for preparing said acellular **red blood cell** substitute.

L14 ANSWER 6 OF 10 USPATFULL on STN

AN 1998:48563 USPATFULL

TI Acellular **red blood cell** substitute

IN Sehgal, Lakshman R., Flossmoor, IL, United States
De Woskin, Richard E., Mount Prospect, IL, United States
Moss, Gerald S., Highland Park, IL, United States

Gould, Steven A., Highland Park, IL, United States

Rosen, Arthur L., Wilmette, IL, United States

Sehgal, Hansa, Flossmoor, IL, United States

PA Northfield Laboratories, Inc., Evanston, IL, United States (U.S. corporation)

PI US 5747649 19980505

AI US 1995-484942 19950607 (8)

RLI Continuation of Ser. No. US 1993-31563, filed on 15 Mar 1993 which is a continuation of Ser. No. US 1990-616727, filed on 21 Nov 1990, now patented, Pat. No. US 5194590 which is a continuation of Ser. No. US 1989-315130, filed on 23 Feb 1989, now abandoned which is a continuation of Ser. No. US 1986-876689, filed on 20 Jun 1986, now patented, Pat. No. US 4826811

DT Utility

FS Granted

EXNAM Primary Examiner: Sayala, Chhaya D.
LREP McDonnell Boehnen Hulbert & Berghoff
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 14 Drawing Figure(s); 10 Drawing Page(s)
LN.CNT 937

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An acellular **red blood cell** substitute
which comprises an essentially **tetramer-free**,
substantially **stroma-free**, cross-linked,
polymerized, pyridoxylated **hemoglobin** and a nontoxic,
pharmaceutically acceptable carrier, its use and a process for preparing
said acellular **red blood cell** substitute.

L14 ANSWER 7 OF 10 USPATFULL on STN

AN 95:99127 USPATFULL

TI Acellular **red blood cell** substitute

IN Sehgal, Lakshman R., Flossmoor, IL, United States

De Woskin, Richard E., Mount Prospect, IL, United States

Moss, Gerald S., Highland Park, IL, United States

Gould, Steven A., Highland Park, IL, United States

Rosen, Arthur L., Wilmette, IL, United States

Sehgal, Hansa, Flossmoor, IL, United States

PA Northfield Laboratories, Inc., Evanston, IL, United States (U.S.
corporation)

PI US 5464814 19951107

AI US 1994-203505 19940228 (8)

DCD 20060502

RLI Continuation of Ser. No. US 1992-896734, filed on 9 Jun 1992, now
abandoned which is a continuation of Ser. No. US 1989-345416, filed on
28 Apr 1989, now abandoned which is a continuation-in-part of Ser. No.
US 1986-876689, filed on 20 Jun 1986, now patented, Pat. No. US 4826811

DT Utility

FS Granted

EXNAM Primary Examiner: Low, Christopher S. F.

LREP Banner & Allegretti, Ltd.

CLMN Number of Claims: 1

ECL Exemplary Claim: 1

DRWN 14 Drawing Figure(s); 10 Drawing Page(s)

LN.CNT 1135

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process is disclosed for the preparation of an essentially
tetramer-free, essentially **stroma-**
free, cross-linked, **polymerized**, pyridoxylated
hemoglobin which comprises separating **red**
blood cell stroma from blood by means of heat
treating step to remove stromal contaminants and filtration or
centrifugation or both, pyridoxylating, **polymerizing**, and
removing essentially all of the remaining unmodified tetramer.

L14 ANSWER 8 OF 10 USPATFULL on STN

AN 93:20685 USPATFULL

TI Acellular **red blood cell** substitute

IN Sehgal, Lakshman R., Cook County, IL, United States

De Woskin, Richard E., Cook County, IL, United States

Moss, Gerald S., Lake County, IL, United States

Gould, Steven A., Lake County, IL, United States

Rosen, Arthur L., Cook County, IL, United States

Sehgal, Hansa, Cook County, IL, United States

PA Northfield Laboratories, Inc., Evanston, IL, United States (U.S.
corporation)

PI US 5194590 19930316

AI US 1990-616727 19901121 (7)

DCD 20060502

RLI Continuation of Ser. No. US 1989-315130, filed on 23 Feb 1989, now

abandoned which is a continuation of Ser. No. US 1989-876689, filed on
20 Jun 1989, now patented, Pat. No. US 4826811

DT Utility
FS Granted
EXNAM Primary Examiner: Stone, Jacqueline
LREP Allegretti & Witcoff, Ltd.
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 14 Drawing Figure(s); 10 Drawing Page(s)
LN.CNT 855

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An acellular **red blood cell** substitute
which comprises an essentially **tetramer-free**,
substantially **stroma-free**, cross-linked,
polymerized, pyridoxylated **hemoglobin** and a nontoxic,
pharmaceutically acceptable carrier, its uses and a process for
preparing said acellular **red blood cell**
substitute.

L14 ANSWER 9 OF 10 USPATFULL on STN

AN 89:34363 USPATFULL
TI Acellular **red blood cell** substitute
IN Sehgal, Lakshman R., Cook County, IL, United States
De Woskin, Richard E., Cook County, IL, United States
Moss, Gerald S., Lake County, IL, United States
Gould, Steven A., Lake County, IL, United States
Rosen, Arthur L., Cook County, IL, United States
Sehgal, Hansa, Cook County, IL, United States
PA Northfield Laboratories, Inc., Evanston, IL, United States (U.S.
corporation)
PI US 4826811 19890502
AI US 1986-876689 19860620 (6)
DT Utility
FS Granted
EXNAM Primary Examiner: Brown, Johnnie R.; Assistant Examiner: Stone,
Jacqueline M.
LREP Allegretti & Witcoff, Ltd.
CLMN Number of Claims: 38
ECL Exemplary Claim: 1,14
DRWN 11 Drawing Figure(s); 10 Drawing Page(s)
LN.CNT 1021

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An acellular **red blood cell** substitute
which comprises an essentially **tetramer-free**,
substantially **stroma-free**, cross-linked,
polymerized, pyridoxylated **hemoglobin** and a nontoxic,
pharmaceutically acceptable carrier, its use and a process for preparing
said acellular **red blood cell** substitute.

L14 ANSWER 10 OF 10 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN

AN 2004-304610 [28] WPIDS
DNC C2004-115725
TI **Treatment** of mammal suffering from life threatening level of
red blood cell hemoglobin as result
of **blood loss**, comprises administration of
polymerized hemoglobin solution to mammal.
DC B04
IN DEWOSKIN, R E; DOUBLEDAY, M D; GOULD, S A; HIDES, G A
PA (NORT-N) NORTHFIELD LAB
CYC 106
PI US 2004067876 A1 20040408 (200428)* 15
WO 2004037279 A1 20040506 (200430) EN
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS
LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK

DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
 KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH
 PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC
 VN YU ZA ZM ZW

AU 2003272827 A1 20040513 (200468)

NO 2005001390 A 20050530 (200545)

EP 1553968 A1 20050720 (200547) EN

R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV
 MC MK NL PT RO SE SI SK TR

JP 2006502231 W 20060119 (200607) 28

ADT US 2004067876 A1 Provisional US 2002-415935P 20021003, US 2003-678927
 20031003; WO 2004037279 A1 WO 2003-US31377 20031003; AU 2003272827 A1 AU
 2003-272827 20031003; NO 2005001390 A WO 2003-US31377 20031003, NO
 2005-1390 20050316; EP 1553968 A1 EP 2003-755029 20031003, WO 2003-US31377
 20031003; JP 2006502231 W WO 2003-US31377 20031003, JP 2004-546786
 20031003

FDT AU 2003272827 A1 Based on WO 2004037279; EP 1553968 A1 Based on WO
 2004037279; JP 2006502231 W Based on WO 2004037279

PRAI US 2002-415935P 20021003; US 2003-678927 20031003

AB US2004067876 A UPAB: 20040429

NOVELTY - **Treatment** of a mammal suffering from a life
 threatening level of **red blood cell**
hemoglobin (RBC Hb) as the result of
blood loss, comprises administering a
polymerized hemoglobin solution to the mammal.

ACTIVITY - Antianemic; Vasotropic. The dose of PolyHeme (RTM)
 received by 171 patients was 50-100 g. The maximum rate of infusion was
 approx. 2 units (1 L) per minute in uncontrolled hemorrhage. The maximum
 plasma **hemoglobin** concentration was 8 g/dL in a single patient
 who received 8 units of PolyHeme. The maximum mean plasma
hemoglobin concentration was 5.9 plus or minus 1.1 g/dL in the
 group of patient who received 20 units of PolyHeme, reflecting the
 equilibrium between ongoing **blood loss** and
 replacement. There was no mortality increase as the **RBC**
hemoglobin concentration fell below 3 g/dL.

MECHANISM OF ACTION - None given.

USE - The method is for **treating** a mammal suffering from a
 life threatening level of **red blood cell**
hemoglobin (RBC Hb) as the result of massive
blood loss. The method **prevents anemia**
 , irreversible **ischemia**, or hypovolemic **shock** in a
 patient suffering from massive **blood loss**. (All
 claimed)

ADVANTAGE - The administration of the **hemoglobin** solution
 maintains a mean circulating **hemoglobin** level greater than 5
 g/d, and maintains **arterial pressure** above 60 mmHg.
 The solution avoids the toxicities associated with vasoconstriction, and
 renal, pancreatic, gastrointestinal and cardiac dysfunction.

DESCRIPTION OF DRAWING(S) - The figure is a graph depicting the mean
 (plus or minus SD) total plasma **hemoglobin** concentration versus
 dose of **polymerized hemoglobin** solution.

Dwg.1/4

=> d 116 1-6 bib ab

L16 ANSWER 1 OF 6 USPATFULL on STN

AN 2005:75766 USPATFULL

TI Method and apparatus for preparing an acellular **red**
blood cell substitute

IN **DeWoskin, Richard E.**, St. Charles, IL, UNITED STATES
Doubleday, Marc D., Cary, IL, UNITED STATES

PA Northfield Laboratories, Inc. (U.S. corporation)

PI US 2005065067 A1 20050324

AI US 2004-993228 A1 20041119 (10)

RLI Continuation of Ser. No. US 2002-274099, filed on 17 Oct 2002, ABANDONED
Continuation of Ser. No. US 1999-155419, filed on 10 May 1999, GRANTED,
Pat. No. US 6498141 A 371 of International Ser. No. WO 1997-US5088,
filed on 27 Mar 1997, PENDING

PRAI US 1996-14389P 19960328 (60)

DT Utility

FS APPLICATION

LREP MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP, 300 S. WACKER DRIVE, 32ND
FLOOR, CHICAGO, IL, 60606

CLMN Number of Claims: 17

ECL Exemplary Claim: 1

DRWN 6 Drawing Page(s)

LN.CNT 763

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process is disclosed for the preparation of an essentially
tetramer-free, substantially **stroma-**
free, **polymerized**, pyridoxylated **hemoglobin**.
Also disclosed is an essentially **tetramer-free**,
substantially **stroma-free**, **polymerized**,
pyridoxylated **hemoglobin** product capable of being infused into
human patients in an amount of up to about 5 liters.

L16 ANSWER 2 OF 6 USPATFULL on STN

AN 2004:88900 USPATFULL

TI Method for **treating** patients with massive **blood**
loss

IN Gould, Steven A., Highland Park, IL, UNITED STATES
DeWoskin, Richard E., St. Charles, IL, UNITED STATES
Doubleday, Marc D., Cary, IL, UNITED STATES
Hides, George A., Chicago, IL, UNITED STATES

PA Northfield Laboratories, Inc., Evanston, IL (U.S. corporation)

PI US 2004067876 A1 20040408

AI US 2003-678927 A1 20031003 (10)

PRAI US 2002-415935P 20021003 (60)

DT Utility

FS APPLICATION

LREP MCDONNELL BOEHNEN HULBERT & BERGHOFF, 300 SOUTH WACKER DRIVE, SUITE
3200, CHICAGO, IL, 60606

CLMN Number of Claims: 47

ECL Exemplary Claim: 1

DRWN 4 Drawing Page(s)

LN.CNT 1013

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods for **treating** a mammal suffering from massive
blood loss comprising administering to the mammal a
polymerized hemoglobin solution.

L16 ANSWER 3 OF 6 USPATFULL on STN

AN 2003:271443 USPATFULL

TI Method and apparatus for preparing an acellular read blood cell
substitute

IN DeWoskin, Richard E., St. Charles, IL, UNITED STATES
Doubleday, Marc D., Cary, IL, UNITED STATES

PA Northfield Laboratories, Inc. (U.S. corporation)

PI US 2003191050 A1 20031009

AI US 2002-274099 A1 20021017 (10)

RLI Continuation of Ser. No. US 1999-155419, filed on 10 May 1999, GRANTED,
Pat. No. US 6498141 A 371 of International Ser. No. WO 1997-US5088,
filed on 27 Mar 1997, PENDING

PRAI US 1996-14389P 19960328 (60)

DT Utility

FS APPLICATION

LREP Steven J. Sarussi, McDonnell Boehnen Hulbert & Berghoff, 32nd Floor, 300
S. Wacker Drive, Chicago, IL, 60606

CLMN Number of Claims: 17

ECL Exemplary Claim: 1

DRWN 6 Drawing Page(s)

LN.CNT 761

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process is disclosed for the preparation of an essentially **tetramer-free**, substantially **stroma-free**, **polymerized**, pyridoxylated **hemoglobin**. Also disclosed is an essentially **tetramer-free**, substantially **stroma-free**, **polymerized**, pyridoxylated **hemoglobin** product capable of being infused into human patients in an amount of up to about 5 liters.

L16 ANSWER 4 OF 6 USPATFULL on STN

AN 2003:188694 USPATFULL

TI Acellular **red blood cell** substitute

IN Sehgal, Lakshman R., Flossmoor, IL, UNITED STATES

DeWoskin, Richard E., Mount Prospect, IL, UNITED STATES

Moss, Gerald S., Highland Park, IL, UNITED STATES

Gould, Steven A., Highland Park, IL, UNITED STATES

Rosen, Arthur L., Wilmette, IL, UNITED STATES

Sehgal, Hansa, Flossmoor, IL, UNITED STATES

PA Northfield Laboratories, Inc. (U.S. corporation)

PI US 2003130487 A1 20030710

US 6914127 B2 20050705

AI US 2003-348579 A1 20030121 (10)

RLI Continuation of Ser. No. US 2001-995203, filed on 27 Nov 2001, GRANTED, Pat. No. US 6552173 Continuation of Ser. No. US 2000-638471, filed on 14 Aug 2000, GRANTED, Pat. No. US 6323320 Continuation of Ser. No. US 1993-31563, filed on 15 Mar 1993, GRANTED, Pat. No. US 6133425 Continuation of Ser. No. US 1990-616727, filed on 21 Nov 1990, GRANTED, Pat. No. US 5194590 Continuation of Ser. No. US 1989-315130, filed on 23 Feb 1989, ABANDONED Continuation of Ser. No. US 1986-876689, filed on 20 Jun 1986, GRANTED, Pat. No. US 4826811

DT Utility

FS APPLICATION

LREP Steven J. Sarussi, McDonnell Boehnen Hulbert & Berghoff, 32nd Floor, 300 S. Wacker Drive, Chicago, IL, 60606

CLMN Number of Claims: 1

ECL Exemplary Claim: 40

DRWN 10 Drawing Page(s)

LN.CNT 898

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An acellular **red blood cell** substitute which comprises an essentially **tetramer-free**, substantially **stroma-free**, cross-linked, **polymerized**, pyridoxylated **hemoglobin** and a nontoxic, pharmaceutically acceptable carrier, its use and a process for preparing said acellular **red blood cell** substitute.

L16 ANSWER 5 OF 6 USPATFULL on STN

AN 2002:120018 USPATFULL

TI Acellular **red blood cell** substitute

IN Sehgal, Lakshman R., Flossmoor, IL, UNITED STATES

DeWoskin, Richard E., Mount Prospect, IL, UNITED STATES

Moss, Gerald S., Highland Park, IL, UNITED STATES

Gould, Steven A., Highland Park, IL, UNITED STATES

Rosen, Arthur L., Wilmette, IL, UNITED STATES

Sehgal, Hansa, Flossmoor, IL, UNITED STATES

PA Northfield Laboratories, Inc. (U.S. corporation)

PI US 2002062007 A1 20020523

US 6552173 B2 20030422

AI US 2001-995203 A1 20011127 (9)

RLI Continuation of Ser. No. US 2000-638471, filed on 14 Aug 2000, PATENTED Continuation of Ser. No. US 1993-31563, filed on 15 Mar 1993, PATENTED Continuation of Ser. No. US 1990-616727, filed on 21 Nov 1990, PATENTED

Continuation of Ser. No. US 1989-315130, filed on 23 Feb 1989, ABANDONED
Continuation of Ser. No. US 1986-876689, filed on 20 Jun 1986, PATENTED

DT Utility
FS APPLICATION
LREP Steven J. Sarussi, McDonnell Boehnen Hulbert & Berghoff, 32nd Floor, 300
S. Wacker Drive, Chicago, IL, 60606
CLMN Number of Claims: 1
ECL Exemplary Claim: 40
DRWN 10 Drawing Page(s)
LN.CNT 899

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An a cellular **red blood cell** substitute
which comprises an essentially **tetramer-free**,
substantially **stroma-free**, cross-linked,
polymerized, pyridoxylated **hemoglobin** and a nontoxic,
pharmaceutically acceptable carrier, its use and a process for preparing
said a cellular **red blood cell** substitute.

L16 ANSWER 6 OF 6 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN

AN 2004-304610 [28] WPIDS

DNC C2004-115725

TI **Treatment** of mammal suffering from life threatening level of
red blood cell hemoglobin as result
of **blood loss**, comprises administration of
polymerized hemoglobin solution to mammal.

DC B04

IN **DEWOSKIN, R E**; **DOUBLEDAY, M D**; **GOULD, S A**; **HIDES, G A**

PA (NORT-N) NORTHFIELD LAB

CYC 106

PI US 2004067876 A1 20040408 (200428)* 15

WO 2004037279 A1 20040506 (200430) EN

RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS
LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH
PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC
VN YU ZA ZM ZW

AU 2003272827 A1 20040513 (200468)

NO 2005001390 A 20050530 (200545)

EP 1553968 A1 20050720 (200547) EN

R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV
MC MK NL PT RO SE SI SK TR

JP 2006502231 W 20060119 (200607) 28

ADT US 2004067876 A1 Provisional US 2002-415935P 20021003, US 2003-678927
20031003; WO 2004037279 A1 WO 2003-US31377 20031003; AU 2003272827 A1 AU
2003-272827 20031003; NO 2005001390 A WO 2003-US31377 20031003, NO
2005-1390 20050316; EP 1553968 A1 EP 2003-755029 20031003, WO 2003-US31377
20031003; JP 2006502231 W WO 2003-US31377 20031003, JP 2004-546786
20031003

FDT AU 2003272827 A1 Based on WO 2004037279; EP 1553968 A1 Based on WO
2004037279; JP 2006502231 W Based on WO 2004037279

PRAI US 2002-415935P 20021003; US 2003-678927 20031003

AB US2004067876 A UPAB: 20040429

NOVELTY - **Treatment** of a mammal suffering from a life
threatening level of **red blood cell**
hemoglobin (RBC Hb) as the result of
blood loss, comprises administering a
polymerized hemoglobin solution to the mammal.

ACTIVITY - Antianemic; Vasotropic. The dose of PolyHeme (RTM)
received by 171 patients was 50-100 g. The maximum rate of infusion was
approx. 2 units (1 L) per minute in uncontrolled hemorrhage. The maximum
plasma **hemoglobin** concentration was 8 g/dL in a single patient
who received 8 units of PolyHeme. The maximum mean plasma
hemoglobin concentration was 5.9 plus or minus 1.1 g/dL in the

group of patient who received 20 units of PolyHeme, reflecting the equilibrium between ongoing **blood loss** and replacement. There was no mortality increase as the **RBC hemoglobin** concentration fell below 3 g/dL.

MECHANISM OF ACTION - None given.

USE - The method is for **treating** a mammal suffering from a life threatening level of **red blood cell hemoglobin (RBC Hb)** as the result of massive **blood loss**. The method **prevents anemia**, irreversible **ischemia**, or hypovolemic **shock** in a patient suffering from massive **blood loss**. (All claimed)

ADVANTAGE - The administration of the **hemoglobin** solution maintains a mean circulating **hemoglobin** level greater than 5 g/d, and maintains **arterial pressure** above 60 mmHg. The solution avoids the toxicities associated with vasoconstriction, and renal, pancreatic, gastrointestinal and cardiac dysfunction.

DESCRIPTION OF DRAWING(S) - The figure is a graph depicting the mean (plus or minus SD) total plasma **hemoglobin** concentration versus dose of **polymerized hemoglobin** solution.
Dwg.1/4

=> d 118 1-5 bib ab

L18 ANSWER 1 OF 5 USPATFULL on STN
AN 2005:75766 USPATFULL
TI Method and apparatus for preparing an acellular **red blood cell** substitute
IN DeWoskin, Richard E., St. Charles, IL, UNITED STATES
Doubleday, Marc D., Cary, IL, UNITED STATES
PA Northfield Laboratories, Inc. (U.S. corporation)
PI US 2005065067 A1 20050324
AI US 2004-993228 A1 20041119 (10)
RLI Continuation of Ser. No. US 2002-274099, filed on 17 Oct 2002, ABANDONED
Continuation of Ser. No. US 1999-155419, filed on 10 May 1999, GRANTED,
Pat. No. US 6498141 A 371 of International Ser. No. WO 1997-US5088,
filed on 27 Mar 1997, PENDING
PRAI US 1996-14389P 19960328 (60)
DT Utility
FS APPLICATION
LREP MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP, 300 S. WACKER DRIVE, 32ND
FLOOR, CHICAGO, IL, 60606
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 6 Drawing Page(s)
LN.CNT 763
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A process is disclosed for the preparation of an essentially **tetramer-free**, substantially **stroma-free**, **polymerized**, pyridoxylated **hemoglobin**. Also disclosed is an essentially **tetramer-free**, substantially **stroma-free**, **polymerized**, pyridoxylated **hemoglobin** product capable of being infused into human patients in an amount of up to about 5 liters.

L18 ANSWER 2 OF 5 USPATFULL on STN
AN 2004:88900 USPATFULL
TI Method for **treating** patients with massive **blood loss**
IN Gould, Steven A., Highland Park, IL, UNITED STATES
DeWoskin, Richard E., St. Charles, IL, UNITED STATES
Doubleday, Marc D., Cary, IL, UNITED STATES
Hides, George A., Chicago, IL, UNITED STATES
PA Northfield Laboratories, Inc., Evanston, IL (U.S. corporation)

PI US 2004067876 A1 20040408
AI US 2003-678927 A1 20031003 (10)
PRAI US 2002-415935P 20021003 (60)
DT Utility
FS APPLICATION
LREP MCDONNELL BOEHNEN HULBERT & BERGHOFF, 300 SOUTH WACKER DRIVE, SUITE
3200, CHICAGO, IL, 60606
CLMN Number of Claims: 47
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 1013

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods for **treating** a mammal suffering from massive
blood loss comprising administering to the mammal a
polymerized hemoglobin solution.

L18 ANSWER 3 OF 5 USPATFULL on STN

AN 2003:271443 USPATFULL

TI Method and apparatus for preparing an acellular red blood cell
substitute

IN DeWoskin, Richard E., St. Charles, IL, UNITED STATES
Doubleday, Marc D., Cary, IL, UNITED STATES

PA Northfield Laboratories, Inc. (U.S. corporation)

PI US 2003191050 A1 20031009

AI US 2002-274099 A1 20021017 (10)

RLI Continuation of Ser. No. US 1999-155419, filed on 10 May 1999, GRANTED,
Pat. No. US 6498141 A 371 of International Ser. No. WO 1997-US5088,
filed on 27 Mar 1997, PENDING

PRAI US 1996-14389P 19960328 (60)

DT Utility

FS APPLICATION

LREP Steven J. Sarussi, McDonnell Boehnen Hulbert & Berghoff, 32nd Floor, 300
S. Wacker Drive, Chicago, IL, 60606

CLMN Number of Claims: 17

ECL Exemplary Claim: 1

DRWN 6 Drawing Page(s)

LN.CNT 761

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process is disclosed for the preparation of an essentially
tetramer-free, substantially **stroma-**
free, polymerized, pyridoxylated **hemoglobin**.
Also disclosed is an essentially **tetramer-free**,
substantially **stroma-free, polymerized**,
pyridoxylated **hemoglobin** product capable of being infused into
human patients in an amount of up to about 5 liters.

L18 ANSWER 4 OF 5 USPATFULL on STN

AN 2002:42979 USPATFULL

TI METHOD AND APPARATUS FOR PREPARING AN ACELLULAR **RED**
BLOOD CELL SUBSTITUTE

IN DE WOSKIN, RICHARD E., ST. CHARLES, IL, UNITED STATES
DOUBLEDAY, MARC D., CARY, IL, UNITED STATES

PI US 2002025343 A1 20020228

US 6498141 B2 20021224

AI US 1999-155419 A1 19990510 (9)
WO 1997-US5088 19970327

DT Utility

FS APPLICATION

LREP MCDONNELL BOEHNEN HULBERT & BERGHOFF, 300 SOUTH WACKER DRIVE, SUITE
3200, CHICAGO, IL, 60606

CLMN Number of Claims: 20

ECL Exemplary Claim: 1

DRWN 6 Drawing Page(s)

LN.CNT 777

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process is disclosed for the preparation of an essentially tetramerfree, substantially stromafree, **polymerized**, pyridoxylated **hemoglobin**. Also disclosed is an essentially tetramerfree, substantially stromafree, **polymerized**, pyridoxylated **hemoglobin** product capable of being infused into human patients in an amount of up to about 5 liters.

L18 ANSWER 5 OF 5 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN

AN 2004-304610 [28] WPIDS

DNC C2004-115725

TI **Treatment** of mammal suffering from life threatening level of **red blood cell hemoglobin** as result of **blood loss**, comprises administration of **polymerized hemoglobin** solution to mammal.

DC B04

IN DEWOSKIN, R E; **DOUBLEDAY, M D**; GOULD, S A; HIDES, G A

PA (NORT-N) NORTHFIELD LAB

CYC 106

PI US 2004067876 A1 20040408 (200428)* 15

WO 2004037279 A1 20040506 (200430) EN

RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS

LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK

DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR

KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH

PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC

VN YU ZA ZM ZW

AU 2003272827 A1 20040513 (200468)

NO 2005001390 A 20050530 (200545)

EP 1553968 A1 20050720 (200547) EN

R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV

MC MK NL PT RO SE SI SK TR

JP 2006502231 W 20060119 (200607) 28

ADT US 2004067876 A1 Provisional US 2002-415935P 20021003, US 2003-678927 20031003; WO 2004037279 A1 WO 2003-US31377 20031003; AU 2003272827 A1 AU 2003-272827 20031003; NO 2005001390 A WO 2003-US31377 20031003, NO 2005-1390 20050316; EP 1553968 A1 EP 2003-755029 20031003, WO 2003-US31377 20031003; JP 2006502231 W WO 2003-US31377 20031003, JP 2004-546786 20031003

FDT AU 2003272827 A1 Based on WO 2004037279; EP 1553968 A1 Based on WO 2004037279; JP 2006502231 W Based on WO 2004037279

PRAI US 2002-415935P 20021003; US 2003-678927 20031003

AB US2004067876 A UPAB: 20040429

NOVELTY - **Treatment** of a mammal suffering from a life threatening level of **red blood cell hemoglobin (RBC Hb)** as the result of **blood loss**, comprises administering a **polymerized hemoglobin** solution to the mammal.

ACTIVITY - Antianemic; Vasotropic. The dose of PolyHeme (RTM) received by 171 patients was 50-100 g. The maximum rate of infusion was approx. 2 units (1 L) per minute in uncontrolled hemorrhage. The maximum plasma **hemoglobin** concentration was 8 g/dL in a single patient who received 8 units of PolyHeme. The maximum mean plasma **hemoglobin** concentration was 5.9 plus or minus 1.1 g/dL in the group of patient who received 20 units of PolyHeme, reflecting the equilibrium between ongoing **blood loss** and replacement. There was no mortality increase as the **RBC hemoglobin** concentration fell below 3 g/dL.

MECHANISM OF ACTION - None given.

USE - The method is for **treating** a mammal suffering from a life threatening level of **red blood cell hemoglobin (RBC Hb)** as the result of massive **blood loss**. The method **prevents anemia**, irreversible **ischemia**, or hypovolemic **shock** in a patient suffering from massive **blood loss**. (All

claimed)

ADVANTAGE - The administration of the **hemoglobin** solution maintains a mean circulating **hemoglobin** level greater than 5 g/d, and maintains **arterial pressure** above 60 mmHg. The solution avoids the toxicities associated with vasoconstriction, and renal, pancreatic, gastrointestinal and cardiac dysfunction.

DESCRIPTION OF DRAWING(S) - The figure is a graph depicting the mean (plus or minus SD) total plasma **hemoglobin** concentration versus dose of **polymerized hemoglobin** solution.

Dwg.1/4

=> d his

(FILE 'HOME' ENTERED AT 19:27:35 ON 01 MAR 2006)

FILE 'MEDLINE, CAPLUS, BIOSIS, BIOTECHDS, EMBASE, USPATFULL, WPIDS'
ENTERED AT 19:28:15 ON 01 MAR 2006

L1 195015 S (RED BLOOD CELL# OR RBC)
L2 408738 S (HEMOGLOBIN# OR HB)
L3 32727 S L1 AND L2
L4 244 S L3 AND (POLYMER? HEMOGLOBIN)
L5 88 S L4 AND (ACELLULAR SOLUTION OR TETRAMER FREE OR STROMA FREE)
L6 88 S L5 AND (POLYMER? OR BLOOD SUBSTITUT? OR PLASMA EXAPND?)
L7 86 S L6 AND (TREAT? OR THERAPEUT? OR PREVENT? OR AMELIORAT?)
L8 57 S L7 AND (ISCHEM? OR ANEM? OR BLEED?)
L9 55 S L8 AND (DISORDER OR SHOCK OR CIRCULATORY COLLAPSE OR BLOOD L
L10 40 S L9 AND (BLOOD PRESSURE# OR ARTERIAL PRESSURE#)
L11 20 S L10 AND (POLYMERIZED HEMOGLOBIN SOLUTION)
L12 2 S L11 AND (MASSIVE BLOOD LOSS)
L13 2785 S GOULD, S?/AU
L14 10 S L10 AND L13
L15 105 S DEWOSKIN, R?/AU
L16 6 S L10 AND L15
L17 48 S DOUBLEDAY, M?/AU
L18 5 S L10 AND L17
L19 7 S HIDES, G?/AU
L20 2 S L10 AND L19
L21 4 S L14 AND L16
L22 2 S L18 AND L20
L23 2 S L21 AND L22

=> dup rem l11

PROCESSING COMPLETED FOR L11

L24 19 DUP REM L11 (1 DUPLICATE REMOVED)

=> d l24 1-19 bib ab

L24 ANSWER 1 OF 19 USPATFULL on STN
AN 2005:75766 USPATFULL
TI Method and apparatus for preparing an acellular **red blood cell** substitute
IN DeWoskin, Richard E., St. Charles, IL, UNITED STATES
Doubleday, Marc D., Cary, IL, UNITED STATES
PA Northfield Laboratories, Inc. (U.S. corporation)
PI US 2005065067 A1 20050324
AI US 2004-993228 A1 20041119 (10)
RLI Continuation of Ser. No. US 2002-274099, filed on 17 Oct 2002, ABANDONED
Continuation of Ser. No. US 1999-155419, filed on 10 May 1999, GRANTED,
Pat. No. US 6498141 A 371 of International Ser. No. WO 1997-US5088,
filed on 27 Mar 1997, PENDING
PRAI US 1996-14389P 19960328 (60)
DT Utility
FS APPLICATION
LREP MCDONNELL BOEHNNEN HULBERT & BERGHOFF LLP, 300 S. WACKER DRIVE, 32ND

FLOOR, CHICAGO, IL, 60606

CLMN Number of Claims: 17

ECL Exemplary Claim: 1

DRWN 6 Drawing Page(s)

LN.CNT 763

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process is disclosed for the preparation of an essentially **tetramer-free**, substantially **stroma-free**, **polymerized**, pyridoxylated **hemoglobin**. Also disclosed is an essentially **tetramer-free**, substantially **stroma-free**, **polymerized**, pyridoxylated **hemoglobin** product capable of being infused into human patients in an amount of up to about 5 liters.

L24 ANSWER 2 OF 19 USPATFULL on STN DUPLICATE 1

AN 2004:88900 USPATFULL

TI Method for **treating** patients with massive **blood loss**

IN Gould, Steven A., Highland Park, IL, UNITED STATES
DeWoskin, Richard E., St. Charles, IL, UNITED STATES
Doubleday, Marc D., Cary, IL, UNITED STATES
Hides, George A., Chicago, IL, UNITED STATES

PA Northfield Laboratories, Inc., Evanston, IL (U.S. corporation)

PI US 2004067876 A1 20040408

AI US 2003-678927 A1 20031003 (10)

PRAI US 2002-415935P 20021003 (60)

DT Utility

FS APPLICATION

LREP MCDONNELL BOEHNEN HULBERT & BERGHOFF, 300 SOUTH WACKER DRIVE, SUITE 3200, CHICAGO, IL, 60606

CLMN Number of Claims: 47

ECL Exemplary Claim: 1

DRWN 4 Drawing Page(s)

LN.CNT 1013

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods for **treating** a mammal suffering from massive **blood loss** comprising administering to the mammal a **polymerized hemoglobin solution**.

L24 ANSWER 3 OF 19 USPATFULL on STN

AN 2004:327944 USPATFULL

TI Reduced side-effect **hemoglobin** compositions

IN Looker, Douglas L., Fort Lupton, CO, UNITED STATES
Apostol, Izydor Z., Boulder, CO, UNITED STATES
Brucker, Eric A., Evergreen, CO, UNITED STATES
Doyle, Michael P., Boulder, CO, UNITED STATES
Foster, David L., Lafayette, CO, UNITED STATES
Glascock, Christopher B., Louisville, CO, UNITED STATES
Hartman, James C., Boulder, CO, UNITED STATES
Lee, Geoffrey F., Boulder, CO, UNITED STATES
Lemon, Douglas D., Louisville, CO, UNITED STATES
Moore, Edwin G., Boulder, CO, UNITED STATES
Richards, Jane P., Longmont, CO, UNITED STATES
Schick, Michael R., Louisville, CO, UNITED STATES
Trimble, Stephen P., Boulder, CO, UNITED STATES
Pereira, David, Apex, NC, UNITED STATES
Hai, Ton-That, Mundelein, IL, UNITED STATES
Burhop, Kenneth E., Longmont, CO, UNITED STATES

PA Baxter International Inc. (U.S. corporation)

Baxter Healthcare S.A. (U.S. corporation)

PI US 2004259769 A1 20041223

AI US 2003-747580 A1 20031229 (10)

RLI Continuation of Ser. No. US 2000-709914, filed on 10 Nov 2000, GRANTED, Pat. No. US 6670323

PRAI US 1999-165289P 19991112 (60)

DT Utility
FS APPLICATION
LREP SENNIGER POWERS LEAVITT AND ROEDEL, ONE METROPOLITAN SQUARE, 16TH FLOOR,
ST LOUIS, MO, 63102
CLMN Number of Claims: 53
ECL Exemplary Claim: 1
DRWN 18 Drawing Page(s)
LN.CNT 4058

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to novel **hemoglobin** compositions, particularly novel recombinant mutant **hemoglobin** compositions, which eliminate or substantially reduce 1) the creation of heart lesions, 2) gastrointestinal discomfort, 3) pressor effects, and 4) endotoxin hypersensitivity associated with the administration of extracellular **hemoglobin** compositions in various **therapeutic** applications. Applications described include **treatments** for **anemia**, head injury, hemorrhage or hypovolemia, **ischemia**, cachexia, sickle cell crisis and stroke; enhancing cancer **treatments**; stimulating hematopoiesis; improving repair of physically damaged tissues; alleviating cardiogenic **shock**; and **shock** resuscitation.

L24 ANSWER 4 OF 19 USPATFULL on STN

AN 2003:271443 USPATFULL
TI Method and apparatus for preparing an acellular read blood cell substitute
IN DeWoskin, Richard E., St. Charles, IL, UNITED STATES
Doubleday, Marc D., Cary, IL, UNITED STATES
PA Northfield Laboratories, Inc. (U.S. corporation)
PI US 2003191050 A1 20031009
AI US 2002-274099 A1 20021017 (10)
RLI Continuation of Ser. No. US 1999-155419, filed on 10 May 1999, GRANTED, Pat. No. US 6498141 A 371 of International Ser. No. WO 1997-US5088, filed on 27 Mar 1997, PENDING
PRAI US 1996-14389P 19960328 (60)
DT Utility
FS APPLICATION
LREP Steven J. Sarussi, McDonnell Boehnen Hulbert & Berghoff, 32nd Floor, 300 S. Wacker Drive, Chicago, IL, 60606
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 6 Drawing Page(s)
LN.CNT 761

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process is disclosed for the preparation of an essentially **tetramer-free**, substantially **stroma-free**, **polymerized**, pyridoxylated **hemoglobin**. Also disclosed is an essentially **tetramer-free**, substantially **stroma-free**, **polymerized**, pyridoxylated **hemoglobin** product capable of being infused into human patients in an amount of up to about 5 liters.

L24 ANSWER 5 OF 19 USPATFULL on STN

AN 2003:226278 USPATFULL
TI Increasing function of organs having reduced **red blood cell** flow
IN Jacobs, Edward E., JR., Lexington, MA, UNITED STATES
Rausch, Carl W., Medford, MA, UNITED STATES
PA Biopure Corporation, Cambridge, MA, UNITED STATES, 02141 (U.S. corporation)
PI US 2003158091 A1 20030821
AI US 2003-351977 A1 20030124 (10)
RLI Continuation of Ser. No. US 2000-749504, filed on 26 Dec 2000, GRANTED, Pat. No. US 6541449 Continuation of Ser. No. US 1999-471779, filed on 23

Dec 1999, ABANDONED Continuation of Ser. No. US 1998-215714, filed on 18
Dec 1998, ABANDONED Continuation of Ser. No. US 1995-409337, filed on 23
Mar 1995, GRANTED, Pat. No. US 5854209

DT Utility
FS APPLICATION
LREP HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX
9133, CONCORD, MA, 01742-9133
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN 3 Drawing Page(s)
LN.CNT 1279

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method of **therapeutically**,
or prophylactically, **treating** a vertebrate to increase tissue
oxygenation, or maintain tissue oxygenation, in tissue of a vertebrate
wherein the tissue has a reduced **red blood**
cell flow, and wherein the vertebrate has a normovolemic blood
volume and at least a normal systemic vascular resistance. The method
comprises introducing into the circulatory system of the vertebrate at
least one dose of **hemoglobin**.

L24 ANSWER 6 OF 19 USPATFULL on STN

AN 2003:188694 USPATFULL

TI Acellular **red blood cell** substitute

IN Sehgal, Lakshman R., Flossmoor, IL, UNITED STATES
DeWoskin, Richard E., Mount Prospect, IL, UNITED STATES
Moss, Gerald S., Highland Park, IL, UNITED STATES
Gould, Steven A., Highland Park, IL, UNITED STATES
Rosen, Arthur L., Wilmette, IL, UNITED STATES
Sehgal, Hansa, Flossmoor, IL, UNITED STATES

PA Northfield Laboratories, Inc. (U.S. corporation)

PI US 2003130487 A1 20030710

US 6914127 B2 20050705

AI US 2003-348579 A1 20030121 (10)

RLI Continuation of Ser. No. US 2001-995203, filed on 27 Nov 2001, GRANTED,
Pat. No. US 6552173 Continuation of Ser. No. US 2000-638471, filed on 14
Aug 2000, GRANTED, Pat. No. US 6323320 Continuation of Ser. No. US
1993-31563, filed on 15 Mar 1993, GRANTED, Pat. No. US 6133425
Continuation of Ser. No. US 1990-616727, filed on 21 Nov 1990, GRANTED,
Pat. No. US 5194590 Continuation of Ser. No. US 1989-315130, filed on 23
Feb 1989, ABANDONED Continuation of Ser. No. US 1986-876689, filed on 20
Jun 1986, GRANTED, Pat. No. US 4826811

DT Utility

FS APPLICATION

LREP Steven J. Sarussi, McDonnell Boehnen Hulbert & Berghoff, 32nd Floor, 300
S. Wacker Drive, Chicago, IL, 60606

CLMN Number of Claims: 1

ECL Exemplary Claim: 40

DRWN 10 Drawing Page(s)

LN.CNT 898

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An acellular **red blood cell** substitute
which comprises an essentially **tetramer-free**,
substantially **stroma-free**, cross-linked,
polymerized, pyridoxylated **hemoglobin** and a nontoxic,
pharmaceutically acceptable carrier, its use and a process for preparing
said acellular **red blood cell** substitute.

L24 ANSWER 7 OF 19 USPATFULL on STN

AN 2003:337269 USPATFULL

TI Reduced side-effect **hemoglobin** compositions

IN Looker, Douglas L., Lafayette, CO, United States
Apostol, Izydor Z., Boulder, CO, United States
Brucker, Eric A., Evergreen, CO, United States
Doyle, Michael P., Boulder, CO, United States

Foster, David L., Lafayette, CO, United States
 Glascock, Christopher B., Louisville, CO, United States
 Hartman, James C., Boulder, CO, United States
 Lee, Geoffrey F., Boulder, CO, United States
 Lemon, Douglas D., Louisville, CO, United States
 Moore, Edwin G., Boulder, CO, United States
 Richards, Jane P., Longmont, CO, United States
 Schick, Michael R., Louisville, CO, United States
 Trimble, Stephen P., Boulder, CO, United States
 Pereira, David, Apex, NC, United States
 Hai, Ton-That, Mundelein, IL, United States
 Burhop, Kenneth E., Longmont, CO, United States
 PA Baxter International, Inc., Deerfield, IL, United States (U.S. corporation)
 Baxter Healthcare S.A., Kanton Zurich, SWITZERLAND (non-U.S. corporation)
 PI US 6670323 B1 20031230
 AI US 2000-709914 20001110 (9)
 RLI Continuation-in-part of Ser. No. US 403208, now patented, Pat. No. US 6455676
 PRAI US 1999-165289P 19991112 (60)
 DT Utility
 FS GRANTED
 EXNAM Primary Examiner: Carlson, Karen Cochrane
 LREP Senniger, Powers, Leavitt & Roedel
 CLMN Number of Claims: 155
 ECL Exemplary Claim: 1
 DRWN 18 Drawing Figure(s); 18 Drawing Page(s)
 LN.CNT 4788
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB The invention relates to novel **hemoglobin** compositions, particularly novel recombinant mutant **hemoglobin** compositions, which eliminate or substantially reduce 1) the creation of heart lesions, 2) gastrointestinal discomfort, 3) pressor effects, and 4) endotoxin hypersensitivity associated with the administration of extracellular **hemoglobin** compositions in various **therapeutic** applications. Applications described include **treatments** for **anemia**, head injury, hemorrhage or hypovolemia, **ischemia**, cachexia, sickle cell crisis and stroke; enhancing cancer **treatments**; stimulating hematopoiesis; improving repair of physically damaged tissues; alleviating cardiogenic **shock**; and **shock** resuscitation.
 L24 ANSWER 8 OF 19 USPATFULL on STN
 AN 2003:89372 USPATFULL
 TI Increasing function of organs having reduced **red blood cell** flow
 IN Jacobs, Jr., Edward E., Lexington, MA, United States
 Rausch, Carl W., Medford, MA, United States
 PA Biopure Corporation, Cambridge, MA, United States (U.S. corporation)
 PI US 6541449 B1 20030401
 AI US 2000-749504 20001226 (9)
 RLI Continuation of Ser. No. US 1999-471779, filed on 23 Dec 1999, now abandoned Continuation of Ser. No. US 1998-215714, filed on 18 Dec 1998, now abandoned Continuation of Ser. No. US 1995-409337, filed on 23 Mar 1995, now patented, Pat. No. US 5854209
 DT Utility
 FS GRANTED
 EXNAM Primary Examiner: Borin, Michael
 LREP Hamilton, Brook, Smith & Reynolds, P.C.
 CLMN Number of Claims: 24
 ECL Exemplary Claim: 1
 DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
 LN.CNT 1346

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method of **therapeutically**, or prophylactically, **treating** a vertebrate to increase tissue oxygenation, or maintain tissue oxygenation, in tissue of a vertebrate wherein the tissue has a reduced **red blood cell** flow, and wherein the vertebrate has a normovolemic blood volume and at least a normal systemic vascular resistance. The method comprises introducing into the circulatory system of the vertebrate at least one dose of **hemoglobin**.

L24 ANSWER 9 OF 19 USPATFULL on STN

AN 2002:126694 USPATFULL

TI Increasing function of organs having reduced **red blood cell** flow

IN Jacobs, Edward E., JR., Lexington, MA, UNITED STATES

Rausch, Carl W., Belmont, MA, UNITED STATES

PA Biopure Corporation, Cambridge, MA, UNITED STATES (U.S. corporation)

PI US 2002065211 A1 20020530

AI US 2001-938262 A1 20010823 (9)

RLI Continuation-in-part of Ser. No. US 2000-749504, filed on 26 Dec 2000, PENDING Continuation of Ser. No. US 1999-471779, filed on 23 Dec 1999, ABANDONED Continuation of Ser. No. US 1998-215714, filed on 18 Dec 1998, ABANDONED Continuation of Ser. No. US 1995-409337, filed on 23 Mar 1995, PATENTED

PRAI US 2000-227193P 20000823 (60)

DT Utility

FS APPLICATION

LREP N. Scott Pierce, Esq., HAMILTON, BROOK, SMITH & REYNOLDS, P.C., Two Militia Drive, Lexington, MA, 02421-4799

CLMN Number of Claims: 25

ECL Exemplary Claim: 1

DRWN 5 Drawing Page(s)

LN.CNT 1464

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB At least one dose of **polymerized hemoglobin** is administered a vertebrate to increase tissue oxygenation, or maintain tissue oxygenation, in an organ of a vertebrate wherein the organ has a reduced **red blood cell** flow, and wherein the vertebrate has a normovolemic blood volume and at least a normal systemic vascular resistance. The **hemoglobin** increases function of the organ.

L24 ANSWER 10 OF 19 USPATFULL on STN

AN 2002:120018 USPATFULL

TI Acellular **red blood cell** substitute

IN Sehgal, Lakshman R., Flossmoor, IL, UNITED STATES

DeWoskin, Richard E., Mount Prospect, IL, UNITED STATES

Moss, Gerald S., Highland Park, IL, UNITED STATES

Gould, Steven A., Highland Park, IL, UNITED STATES

Rosen, Arthur L., Wilmette, IL, UNITED STATES

Sehgal, Hansa, Flossmoor, IL, UNITED STATES

PA Northfield Laboratories, Inc. (U.S. corporation)

PI US 2002062007 A1 20020523

US 6552173 B2 20030422

AI US 2001-995203 A1 20011127 (9)

RLI Continuation of Ser. No. US 2000-638471, filed on 14 Aug 2000, PATENTED
Continuation of Ser. No. US 1993-31563, filed on 15 Mar 1993, PATENTED
Continuation of Ser. No. US 1990-616727, filed on 21 Nov 1990, PATENTED
Continuation of Ser. No. US 1989-315130, filed on 23 Feb 1989, ABANDONED
Continuation of Ser. No. US 1986-876689, filed on 20 Jun 1986, PATENTED

DT Utility

FS APPLICATION

LREP Steven J. Sarussi, McDonnell Boehnen Hulbert & Berghoff, 32nd Floor, 300 S. Wacker Drive, Chicago, IL, 60606

CLMN Number of Claims: 1

ECL Exemplary Claim: 40

DRWN 10 Drawing Page(s)

LN.CNT 899

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An a cellular **red blood cell** substitute which comprises an essentially **tetramer-free**, substantially **stroma-free**, cross-linked, **polymerized**, pyridoxylated **hemoglobin** and a nontoxic, pharmaceutically acceptable carrier, its use and a process for preparing said a cellular **red blood cell** substitute.

L24 ANSWER 11 OF 19 USPATFULL on STN

AN 2002:42979 USPATFULL

TI METHOD AND APPARATUS FOR PREPARING AN ACELLULAR **RED BLOOD CELL** SUBSTITUTE

IN DE WOSKIN, RICHARD E., ST. CHARLES, IL, UNITED STATES
DOUBLEDAY, MARC D., CARY, IL, UNITED STATES

PI US 2002025343 A1 20020228

US 6498141 B2 20021224

AI US 1999-155419 A1 19990510 (9)

WO 1997-US5088 19970327

DT Utility

FS APPLICATION

LREP MCDONNELL BOEHNEN HULBERT & BERGHOFF, 300 SOUTH WACKER DRIVE, SUITE
3200, CHICAGO, IL, 60606

CLMN Number of Claims: 20

ECL Exemplary Claim: 1

DRWN 6 Drawing Page(s)

LN.CNT 777

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process is disclosed for the preparation of an essentially tetramerfree, substantially stromafree, **polymerized**, pyridoxylated **hemoglobin**. Also disclosed is an essentially tetramerfree, substantially stromafree, **polymerized**, pyridoxylated **hemoglobin** product capable of being infused into human patients in an amount of up to about 5 liters.

L24 ANSWER 12 OF 19 USPATFULL on STN

AN 2001:215159 USPATFULL

TI Acellular **red blood cell** substitute

IN Sehgal, Lakshman R., Cook County, IL, United States
De Woskin, Richard E., Cook County, IL, United States
Moss, Gerald S., Lake County, IL, United States
Gould, Steven A., Lake County, IL, United States
Rosen, Arthur L., Cook County, IL, United States
Sehgal, Hansa, Cook County, IL, United States

PA Northfield Laboratories, Inc., Evanston, IL, United States (U.S. corporation)

PI US 6323320 B1 20011127

AI US 2000-638471 20000814 (9)

RLI Continuation of Ser. No. US 1993-31563, filed on 15 Mar 1993, now patented, Pat. No. US 6133425 Continuation of Ser. No. US 1990-616727, filed on 21 Nov 1990, now patented, Pat. No. US 5194590 Continuation of Ser. No. US 1989-315130, filed on 23 Feb 1989, now abandoned
Continuation of Ser. No. US 1986-876689, filed on 20 Jun 1986, now patented, Pat. No. US 4826811

DT Utility

FS GRANTED

EXNAM Primary Examiner: Sayala, Chhaya D.

LREP McDonnell Boehnen Hulbert & Berghoff

CLMN Number of Claims: 13

ECL Exemplary Claim: 1

DRWN 14 Drawing Figure(s); 10 Drawing Page(s)

LN.CNT 923

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An acellular **red blood cell** substitute which comprises an essentially **tetramer-free**, substantially **stroma-free**, cross-linked, **polymerized**, pyridoxylated **hemoglobin** and a nontoxic, pharmaceutically acceptable carrier, its use and a process for preparing said acellular **red blood cell** substitute.

L24 ANSWER 13 OF 19 USPATFULL on STN

AN 2000:138510 USPATFULL

TI Acellular **red blood cell** substitute

IN Sehgal, Lakshman R., Cook County, IL, United States
De Woskin, Richard E., Cook County, IL, United States
Moss, Gerald S., Lake County, IL, United States
Gould, Steven A., Lake County, IL, United States
Rosen, Arthur L., Cook County, IL, United States
Sehgal, Hansa, Cook County, IL, United States

PA Northfield Laboratories, Inc, Evanston, IL, United States (U.S. corporation)

PI US 6133425 20001017

AI US 1993-31563 19930315 (8)

RLI Continuation of Ser. No. US 1990-616727, filed on 21 Nov 1990, now patented, Pat. No. US 5194590 which is a continuation of Ser. No. US 1989-315130, filed on 23 Feb 1989, now abandoned which is a continuation of Ser. No. US 1986-876689, filed on 20 Jun 1986, now patented, Pat. No. US 4826811

DT Utility

FS Granted

EXNAM Primary Examiner: Sayala, Chhaya D.

LREP McDonnell Boehnen Hulbert & Berghoff, Sarussi, Steven J.

CLMN Number of Claims: 1

ECL Exemplary Claim: 1

DRWN 14 Drawing Figure(s); 10 Drawing Page(s)

LN.CNT 885

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An acellular **red blood cell** substitute which comprises an essentially **tetramer-free**, substantially **stroma-free**, cross-linked, **polymerized**, pyridoxylated **hemoglobin** and a nontoxic, pharmaceutically acceptable carrier, its use and a process for preparing said acellular **red blood cell** substitute.

L24 ANSWER 14 OF 19 USPATFULL on STN

AN 1998:162474 USPATFULL

TI Method for oxygenating tissue having reduced **red blood cell** flow

IN Jacobs, Jr., Edward E., Lexington, MA, United States
Rausch, Carl W., Medford, MA, United States

PA Biopure Corporation, Cambridge, MA, United States (U.S. corporation)

PI US 5854209 19981229

AI US 1995-409337 19950323 (8)

DT Utility

FS Granted

EXNAM Primary Examiner: Tsang, Cecilia J.; Assistant Examiner: Borin, Michael

LREP Hamilton, Brook, Smith & Reynolds, P.C.

CLMN Number of Claims: 32

ECL Exemplary Claim: 1

DRWN 3 Drawing Figure(s); 3 Drawing Page(s)

LN.CNT 1381

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method of **therapeutically**, or prophylactically, **treating** a vertebrate to increase tissue oxygenation, or maintain tissue oxygenation, in tissue of a vertebrate wherein the tissue has a reduced **red blood cell** flow, and wherein the vertebrate has a normovolemic blood volume and at least a normal systemic vascular resistance. The method

comprises introducing into the circulatory system of the vertebrate at least one dose of **hemoglobin**.

L24 ANSWER 15 OF 19 USPATFULL on STN

AN 1998:147565 USPATFULL

TI Method for producing ultrapure stable polmerized **hemoglobin blood-substitute**

IN Rausch, Carl W., Medford, MA, United States
Gawryl, Maria S., Charlestown, MA, United States
Houtchens, Robert A., Milford, MA, United States
Laccetti, Anthony J., North Andover, MA, United States
Light, William R., Natick, MA, United States

PA Biopure Corporation, Cambridge, MA, United States (U.S. corporation)

PI US 5840852 19981124

AI US 1995-458916 19950602 (8)

RLI Continuation of Ser. No. US 1995-409337, filed on 23 Mar 1995

DT Utility

FS Granted

EXNAM Primary Examiner: Tsang, Cecilia J.; Assistant Examiner: Gupta, Anish

LREP Hamilton, Brook, Smith & Reynolds, P.C.

CLMN Number of Claims: 1

ECL Exemplary Claim: 1

DRWN 3 Drawing Figure(s); 3 Drawing Page(s)

LN.CNT 1137

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method of **therapeutically**, or prophylactically, **treating** a vertebrate to increase tissue oxygenation, or maintain tissue oxygenation, in tissue of a vertebrate wherein the tissue has a reduced **red blood cell** flow, and wherein the vertebrate has a normovolemic blood volume and at least a normal systemic vascular resistance. The method comprises introducing into the circulatory system of the vertebrate at least one dose of **hemoglobin**.

L24 ANSWER 16 OF 19 USPATFULL on STN

AN 1998:48563 USPATFULL

TI Acellular **red blood cell** substitute

IN Sehgal, Lakshman R., Flossmoor, IL, United States
De Woskin, Richard E., Mount Prospect, IL, United States
Moss, Gerald S., Highland Park, IL, United States
Gould, Steven A., Highland Park, IL, United States
Rosen, Arthur L., Wilmette, IL, United States
Sehgal, Hansa, Flossmoor, IL, United States

PA Norhtfield Laboratories, Inc., Evanston, IL, United States (U.S. corporation)

PI US 5747649 19980505

AI US 1995-484942 19950607 (8)

RLI Continuation of Ser. No. US 1993-31563, filed on 15 Mar 1993 which is a continuation of Ser. No. US 1990-616727, filed on 21 Nov 1990, now patented, Pat. No. US 5194590 which is a continuation of Ser. No. US 1989-315130, filed on 23 Feb 1989, now abandoned which is a continuation of Ser. No. US 1986-876689, filed on 20 Jun 1986, now patented, Pat. No. US 4826811

DT Utility

FS Granted

EXNAM Primary Examiner: Sayala, Chhaya D.

LREP McDonnell Boehnen Hulbert & Berghoff

CLMN Number of Claims: 15

ECL Exemplary Claim: 1

DRWN 14 Drawing Figure(s); 10 Drawing Page(s)

LN.CNT 937

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An acellular **red blood cell** substitute which comprises an essentially **tetramer-free**, substantially **stroma-free**, cross-linked,

polymerized, pyridoxylated hemoglobin and a nontoxic, pharmaceutically acceptable carrier, its use and a process for preparing said acellular **red blood cell** substitute.

L24 ANSWER 17 OF 19 USPATFULL on STN
AN 95:99127 USPATFULL
TI Acellular **red blood cell** substitute
IN Sehgal, Lakshman R., Flossmoor, IL, United States
De Woskin, Richard E., Mount Prospect, IL, United States
Moss, Gerald S., Highland Park, IL, United States
Gould, Steven A., Highland Park, IL, United States
Rosen, Arthur L., Wilmette, IL, United States
Sehgal, Hansa, Flossmoor, IL, United States
PA Northfield Laboratories, Inc., Evanston, IL, United States (U.S. corporation)
PI US 5464814 19951107
AI US 1994-203505 19940228 (8)
DCD 20060502
RLI Continuation of Ser. No. US 1992-896734, filed on 9 Jun 1992, now abandoned which is a continuation of Ser. No. US 1989-345416, filed on 28 Apr 1989, now abandoned which is a continuation-in-part of Ser. No. US 1986-876689, filed on 20 Jun 1986, now patented, Pat. No. US 4826811
DT Utility
FS Granted
EXNAM Primary Examiner: Low, Christopher S. F.
LREP Banner & Allegretti, Ltd.
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 14 Drawing Figure(s); 10 Drawing Page(s)
LN.CNT 1135
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A process is disclosed for the preparation of an essentially **tetramer-free**, essentially **stroma-free**, cross-linked, **polymerized**, pyridoxylated **hemoglobin** which comprises separating **red blood cell** stroma from blood by means of heat **treating** step to remove stromal contaminants and filtration or centrifugation or both, pyridoxylating, **polymerizing**, and removing essentially all of the remaining unmodified tetramer.

L24 ANSWER 18 OF 19 USPATFULL on STN
AN 93:20685 USPATFULL
TI Acellular **red blood cell** substitute
IN Sehgal, Lakshman R., Cook County, IL, United States
De Woskin, Richard E., Cook County, IL, United States
Moss, Gerald S., Lake County, IL, United States
Gould, Steven A., Lake County, IL, United States
Rosen, Arthur L., Cook County, IL, United States
Sehgal, Hansa, Cook County, IL, United States
PA Northfield Laboratories, Inc., Evanston, IL, United States (U.S. corporation)
PI US 5194590 19930316
AI US 1990-616727 19901121 (7)
DCD 20060502
RLI Continuation of Ser. No. US 1989-315130, filed on 23 Feb 1989, now abandoned which is a continuation of Ser. No. US 1989-876689, filed on 20 Jun 1989, now patented, Pat. No. US 4826811
DT Utility
FS Granted
EXNAM Primary Examiner: Stone, Jacqueline
LREP Allegretti & Witcoff, Ltd.
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 14 Drawing Figure(s); 10 Drawing Page(s)
LN.CNT 855

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An acellular **red blood cell** substitute
which comprises an essentially **tetramer-free**,
substantially **stroma-free**, cross-linked,
polymerized, pyridoxylated **hemoglobin** and a nontoxic,
pharmaceutically acceptable carrier, its uses and a process for
preparing said acellular **red blood cell**
substitute.

L24 ANSWER 19 OF 19 USPATFULL on STN

AN 89:34363 USPATFULL

TI Acellular **red blood cell** substitute

IN Sehgal, Lakshman R., Cook County, IL, United States
De Woskin, Richard E., Cook County, IL, United States
Moss, Gerald S., Lake County, IL, United States
Gould, Steven A., Lake County, IL, United States
Rosen, Arthur L., Cook County, IL, United States
Sehgal, Hansa, Cook County, IL, United States

PA Northfield Laboratories, Inc., Evanston, IL, United States (U.S.
corporation)

PI US 4826811 19890502

AI US 1986-876689 19860620 (6)

DT Utility

FS Granted

EXNAM Primary Examiner: Brown, Johnnie R.; Assistant Examiner: Stone,
Jacqueline M.

LREP Allegretti & Witcoff, Ltd.

CLMN Number of Claims: 38

ECL Exemplary Claim: 1,14

DRWN 11 Drawing Figure(s); 10 Drawing Page(s)

LN.CNT 1021

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An acellular **red blood cell** substitute
which comprises an essentially **tetramer-free**,
substantially **stroma-free**, cross-linked,
polymerized, pyridoxylated **hemoglobin** and a nontoxic,
pharmaceutically acceptable carrier, its use and a process for preparing
said acellular **red blood cell** substitute.

=>

---Logging off of STN---

=>

Executing the logoff script...

=> LOG Y

STN INTERNATIONAL LOGOFF AT 19:54:52 ON 01 MAR 2006